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ABSTRACT

The paper summarizes findings from four studies on the referral process for students with academic and social/behavioral problems and several observational investigations on students' academic responding time. Research on referral addresses such aspects as reasons for referral, causes ascribed for difficulties, pre-referral classroom intervention, teachers' desired outcomes, and effects of institutional constraints and external pressures. Studies of academic responding time examined differences between students in regular and learning disabilities classrooms, with consideration of seven major topics including differences as a function of teacher-perceived academic and behavioral competence and students' reading group placement. The report recommends that classroom intervention be undertaken prior to a comprehensive psychoeducational evaluation of the student and following a teacher's referral. Interventions, it is suggested, should be based on classroom ecological variables. A response by a school psychologist concurs with the need for classroom intervention and suggests that psychologists work individuallly with children and teachers to develop a solution to the problem. (CL)

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- Referral
- Identification/Classification
- Intervention Planning and Progress Evaluation
- Outcome Evaluation

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Monograph No. 22

# PRACTICAL IMPLICATIONS OF RESEARCH ON REFERRAL AND OPPORTUNITY TO LEARN

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July, 1983

## Preface

This paper is based on a presentation by the authors at the 1982 annual convention of the National Association of School Psychologists in Toronto, Ontario, Canada. The data reported represent the major findings of a number of IRLD research studies; the relevant research reports are listed in Appendix A.

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Appendix A: Bibliography of IRLD Research Reports Summarized in Monograph

# Practical Implications of Research on Referral and Opportunity to Learn

The University of Minnesota Institute for Research on Learning Disabilities (IRLD) has studied the complex issues involved in making decisions about students who experience or exhibit academic and social/behavioral problems in school. Our research on decision making by individuals and teams leads to the conclusion that the most important decision is the decision to refer a student for evaluation. Therefore, IRLD research conducted during 1980-81 was of two kinds: (a) a careful analysis of the factors that act to "drive" the referral process; and (b) a careful analysis of the extent to which "normal" students as well as LD students are being given an opportunity to learn.

This paper summarizes findings from these two lines of research. Following these two sections, the implications of the findings for school psychology are discussed. Reactions to the findings and implications then are provided by a practicing school psychologist (Deborah Hill).[1]

## Research on Referral

Four different studies were conducted to describe the referral process. Data were obtained from four different surveys; the subjects were primarily regular classroom teachers since they most frequently initiate referrals. One study surveyed special education directors. Research findings from the four studies were used to answer eight key questions:

- Nationally, how many referred students are tested and how many tested students are placed?

- What are the reasons for which students are referred?
- What are the causes ascribed for students' school difficulties?
- What pre-referral classroom interventions are attempted?
- What do classroom teachers desire as an outcome for their referral?
- What changes do classroom teachers indicate are necessary for the referred student to fit into the classroom structure?
- What institutional constraints and external pressures affect referral rates?
- What actions do teachers recommend for students exhibiting different characteristics?

NATIONALLY, HOW MANY REFERRED STUDENTS ARE TESTED AND HOW MANY TESTED STUDENTS ARE PLACED?

In order to establish current national rates for students referred, evaluated, and declared eligible for special education services, we asked randomly selected Special Education Directors to indicate: (a) the number of students referred; (b) of those students referred, the number evaluated; and (c) of those evaluated, the number placed during three school years (1977-78, 1978-79, 1979-80). The total return rate of 22% was disappointingly low; further, 10% of those directors returning surveys indicated that the requested data could not be provided. We suspect a reason for the overall low return rate was that districts had not kept records on the number of students referred, evaluated, and placed.

The subjects were the 94 directors (12%) who provided accurate and complete information. These directors were from 37 states evenly distributed throughout the United States. The majority of directors

described their districts as rural (55%); 19% described their districts as urban, 26% as suburban.

This national survey revealed that four to six percent of the school district population are referred annually; data were not collected on the number of students terminated from service annually. On the average, 92% of referred students were evaluated; of those evaluated, 73% were placed. These national rates suggest that referral results in a very high probability for placement. Variability is an important factor in interpreting these percentages. In some districts, only 39% of referred students were evaluated, while in other districts, 100% of referred students were evaluated. The range of evaluated students who were placed in special education was 10% to 100%. Questions are raised by these data: Are teachers this accurate in identifying students who cannot be served in mainstream instruction? Do child study teams serve to verify or confirm teachers' reasons for referral through diagnostic activities yielding only information about child characteristics? Why do some districts automatically test and place referred students? What are the different procedures that are the basis for the extreme variability in referral to placement rates?

Some differences in referral to placement rates were identified for different regions of the U.S. (Western, Southern, North Central, Eastern) and different types of communities (urban, suburban, rural). More students were placed in suburban and rural areas than in urban areas; more students were placed in southern and western regions than in other regions of the United States. Explanations for these

differences include the possibility that more handicapped children live in suburban and rural areas or southern and western regions, that different behaviors are perceived as deviant in different areas, or that differences may be a direct function of the different criteria used to determine student eligibility.

WHAT ARE THE REASONS FOR WHICH STUDENTS ARE REFERRED?

Since referral usually is initiated by the classroom teacher, factors that may influence the classroom teacher's decision to refer a student for assessment and potential services were of primary interest. Classroom teachers completed a survey at the time they referred students; therefore, data are based on actual student referrals. The subjects were 105 elementary teachers from nine states; each region of the United States was represented. Most of the teachers described their district as suburban (56%); 30% described their district as urban, 14% as rural.

In this survey, classroom teachers listed specific reasons for the referrals, attributions for the students' difficulties, interventions attempted within the classroom, desired outcomes for their referrals, and desired changes in the students. The questions were presented in an open-ended format in order to obtain a less constrained perception of factors influencing the teachers' referrals. Multiple responses occurred for each question. Inter-rater reliability on the predetermined categories for each question was never lower than .90.

The 105 referring teachers listed 426 reasons for referring students. Overwhelmingly, the referral reasons reflected within-

student characteristics (e.g., memory problems, short attention span, disruptive behavior). Only six reasons reflected teacher, school, or home-related reasons (1.4%). For example, one teacher questioned the current grade placement of the student; another teacher wrote, "I'm not reaching this student - he's not making academic gains in my classroom."

The referral reasons were classified according to the categories identified by UCLA's Marker Variable Project (Keogh, Major-Kingsley, Omori-Gordon, & Reid, 1980). The top five reasons for referral and their frequency percentages were: learning-related (39.9%), emotionally-manifested (21.8%), attention-related (11.0%), performance disorders (8.5%), and behavior disorders (7.0%). Consistent with previous research, learning-related and emotionally-manifested reasons were most common. Only 10% of the referred students did not have one of these reasons listed as a teacher concern. Sixty-five percent of the learning related reasons referred to poor academic performance, such as "poor reading" or "can't write a paragraph." Reading difficulties were the most frequently mentioned academic area; 37% of the students were referred for a reading problem. Over half of the emotionally-manifested reasons reflected passive, non-aggressive indicators of emotional behavior such as poor self-concept, poor school adjustment, or immaturity. The remaining categories comprised 10.4% of total reasons (N = 426) and included such reasons as language, physical and perceptual-motor delays, and activity disorders.

The qualities of the reasons were described with reference to degree of specificity and objectivity. The reasons for referral were

primarily general (e.g., "weak in spelling") or semi-specific (e.g., "problems in computational math"). Only six reasons indicated a specific, clearly delineated reason (e.g., "can't learn short a vowel pattern"). Reasons were rated as subjective if an understanding of the reason was contingent upon the teacher's perception; thus, these reasons could vary from teacher to teacher depending on the individual teacher's tolerance for the behavior. Fifty-eight percent of the students were referred for subjective reasons, such as "distractibility," "poor motivation," or "not working up to his potential." Nineteen of the 105 students were referred because of an "inability." These included "inability to learn and retain reading skills," "inability to be attentive,' or "inability to apply knowledge."

From this sample of referring teachers, it appears that students are referred primarily for student reasons; the role of the educational environment rarely is questioned by the referring teacher. Yet, an understanding of the referral reason is contingent upon the teacher's perception of student behavior.

WHAT ARE THE CAUSES ASCRIBED FOR STUDENTS' DIFFICULTIES?

The 105 teachers identified 149 causes for student difficulties, which were classified into four categories: student, home, teacher, and school system. Student causes (e.g., birth/medical defects, ability) and home causes (e.g., family stability, parental expectations) occurred most frequently, 61.7% and 35.6%, respectively. Thus, 97% of the identified attributions at the point of referral were external to the educational environment. Within the category of

student causes, half were due to birth/medical defects, low academic potential, and psychological process deficits. Within the category of home causes, 60% reflected severe family difficulties that may require non-school based interventions.

At the point of referral, only 11 of the referring teachers (10.5%) did not indicate a cause for the student's difficulties; most teachers believed they knew the source of the student's difficulties. Some teachers believed they had identified a handicapped student; in fact, 12 of the teachers (11.4%) indicated the cause as a special education label (e.g., "LD" or "MR"). Again, the emphasis in the teacher's responses is on student causes; minimal emphasis is placed on the role of the educational environment in contributing to the student's perceived difficulties. Implications for teachers are numerous, especially if teachers believe they have little effect on students' behavior. An emphasis on causes that are out of the teachers' control may be creating "teaching helplessness."

WHAT PRE-REFERRAL CLASSROOM INTERVENTIONS ARE ATTEMPTED?

Teachers indicated attempting 328 pre-referral interventions, an average of three interventions per student. There was considerable variability in the reported interventions. Teaching methods (curriculum adjustment, small group formation) and behavioral strategies (charting, contracts, rewards) comprised one-half of those interventions attempted (29.3% and 22.0%, respectively). The most common teaching methods were curriculum adjustment, individual attention, and orienting the student to the task at hand.

Teaching methods, behavioral strategies, structural changes (seat change, carrel, peer tutor) and use of specific materials comprised

75% of the interventions attempted. These interventions are dependent on the classroom teacher for implementation. Only the categories of Specialized Help (14.99%) and Information (10.5%) involved any assistance to the classroom teacher. Thus, assistance from support staff was used for about one-fourth of the pre-referral interventions implemented.

Teachers were asked to list the school professionals with whom they spoke concerning the referral. The top five professionals mentioned, in rank order, were the special education teacher, principal, parents, other classroom teachers, and school psychologist. Only 13% of these contacts were the result of a formal conference. It is interesting that teachers discussed the referred student with several professionals but did not consider these consultations, conferences, or conversations as a frequently used pre-referral intervention.

It has been suggested that to be accountable, interventions need to include a measure of developmental or behavior change during a defined time period. Only 28.6% of the interventions were associated with a specified time period; few mentioned any evaluation measure. It appears that pre-referral interventions as now implemented are not meeting the suggested criteria for accountabililty.

WHAT DO CLASSROOM TEACHERS DESIRE AS AN OUTCOME FOR THEIR REFERRAL?

The 105 teachers indicated a total of 130 desired outcomes; generally, the teachers had a single outcome in mind. The six most frequently desired outcomes across teachers were special education placement (30.0%), assessment (18.5%), decision making (17.7%), help

for the student, such as tutoring or counseling (13.1%), educational suggestions (11.5%), and student change (9.2%). Placement, assessment, and decision making comprised 66% of the desired outcomes. It appears that when a teacher refers a student, she/he is thinking of satisfying PL 94-142 and appears to have placement or placement-related activities in mind. In contrast, only 11.5% of the desired outcomes involved requests for classroom teaching suggestions; about 9% of the outcomes were related to the specific referral reason (i.e., student referred for short attention span; teacher wants student's attention span increased).

Teachers' desired outcomes were related to characteristics of the referred student. When the teacher desired placement, the referred student was rated worse on functioning within the group. When the teacher wanted assessment, the referred student was rated better on functioning within the group and being more typical of other group members. When the teacher wanted decision making, the student was rated higher on group functioning variables as well as motivation, behavior, and maturity. It is possible that teachers' desired outcomes reflect a continuum of restrictiveness; poorer student functioning appears to reflect a desire for placement.

WHAT CHANGES DO CLASSROOM TEACHERS INDICATE ARE NECESSARY FOR THE REFERRED STUDENT TO FIT INTO THE CLASSROOM STRUCTURE?

The changes in referred students that teachers wanted were indicative of task readiness (52.0%), academic (25.2%), behavioral (14.6%), and program changes (7.0%). Over half of the desired changes reflected increased student receptivity and preparation for learning.

Teachers wanted the students to be more willing to learn, show a positive attitude toward assignments, demonstrate increased motivation, attempt assignments willingly, and follow directions. In contrast, one-quarter of the desired changes required improvement in academic areas. Hence, it may be that the students' receptivity for learning is an important variable that affects a referred student's mainstream placement. While teachers indicated the areas in which the student must change, few mentioned an intervention plan to initiate the desired change.

## WHAT INSTITUTIONAL CONSTRAINTS AND EXTERNAL PRESSURES AFFECT REFERRAL RATES?

Fifty classroom teachers from Minnesota and Florida listed the factors that facilitated or inhibited their decisions to refer students for a psychoeducational evaluation and special education consideration. Factors operating within the school system were labeled institutional constraints; those occurring with a frequency of 40% or more included the competence of the person receiving the referral, availability of services, paperwork and meeting time, and limited classroom instructional strategies generated.

Most teachers (70%) indicated that no external pressures (i.e., factors operating outside the school system) existed. External pressures mentioned by the other teachers included federal and state guidelines, parental pressure for service, and external agency influences. These external pressures were all mentioned with a frequency of less than 10%.

The teachers' written comments were quite revealing. Fifty percent of the teachers indicated that the probability a student would

be placed if tested was 90-100%. Several teachers questioned current PL 94-142 procedures. One teacher stated, "How many students would qualify if they could be tested in the same way those who are referred are?" Another wrote, "I'm not sure students benefit from the distinction of being different. Many students would do equally well in a smaller classroom with more help from a regular teacher." Many mentioned their frustration when no teaching suggestions for use by the classroom teacher accompanied the assessment, especially when the student did not qualify for service. In short, "teacher pay-off" was low.

WHAT ACTIONS DO TEACHERS RECOMMEND FOR STUDENTS EXHIBITING DIFFERENT CHARACTERISTICS?

Over 150 regular education teachers nationwide rated possible interventions for students portrayed as average psychometrically but exhibiting behaviors indicative of social immaturity, perceptual handicaps, or unmanageability. Unlike the research described previously, this study employed a case study format. Each teacher was assigned one of three case studies. The case studies were identical in format and differed only in descriptive behaviors used to reflect socially immature, unmanageable, or perceptually delayed behavior. After the teachers read a two-page case study describing a third-grade boy, they rated 40 interventions on a scale of 1 to 5; their ratings indicated their degree of agreement with the use of the intervention for the particular student described.

The results reveal what classroom teachers say they would do for students exhibiting different behaviors. A factor analysis identified

four intervention factors: teacher-directed, consultation, external placements, and teacher/non-directed. The mean rating of importance for teacher-directed factors (4.0) was highest. Regardless of case study rated, teachers indicated they would want to modify materials, change their teaching style, select special materials, and evaluate the student's progress. Consultation interventions received a mean rating of [illegible] and indicated the teachers wanted knowledge of test scores, and consultation with specialists (e.g., speech therapist and psychiatrist). External placement interventions ($\bar{X}$ = 3.3) included placement of student in other room, resource room help, and referral to special education. The factor receiving the lowest mean rating of importance was teacher non-directed ($\bar{X}$ = 2.8). Teachers least favored such interventions as peer tutoring, increased parental involvement, and drug medication.

These findings describe what classroom teachers <u>say</u> they would do for students exhibiting different behaviors. Clearly, teachers indicate they prefer to be involved. The data on referral represent classroom teachers' perceptions. An important missing link is what actually occurs in mainstream classrooms. A second area of IRLD research addressed the question: How much opportunity to learn do students have?

## Research on Academic Responding Time

Research on academic responding time, conducted during 1980-81, was directed at observing large numbers of students in both regular and LD classrooms to determine the extent to which there were

differences in how various groups of students received instruction (i.e., instructional ecology) or how they spent their time engaged in academic, task management, or inappropriate behaviors. The impetus for IRLD observational research on academic responding time was research that highlighted the importance of time spent engaged in academic responses as a critical variable in student learning (cf. Denham & Lieberman, 1980; Hall, Delquadri, Greenwood, & Thurston, 1982). (For a comprehensive review of the literature on academic engaged time, see Graden, Thurlow, & Ysseldyke, 1982.) It has been demonstrated that in order to learn, students must have the opportunity to learn and to engage in academic practice (i.e., academic responding time). Thus, IRLD research focused on describing what actually occurs in classrooms both for regular classroom students prior to the point of referral and for LD students in special classes.

In the study of academic responding time, it is important to recognize the breakdown of how time is spent in a typical school day. Of the total time in the school day, a certain portion is inevitably not available for instruction due to lunch, recess, and other non-instructional events. The time that remains is that portion which is scheduled instructional time. However, of the scheduled time, time also is lost to transitions and interruptions, with the time remaining labeled the actual allocated instructional time, or the time that students actually receive instruction. The amount of time allocated to instruction is important because allocated time is a significant correlate of student achievement (cf. Borg, 1980). Yet, within allocated instructional time, individual students and groups of

students may or may not actually be engaged in academic activities. The portion of time that students are engaged in learning, which is also significantly related to achievement, is labeled academic engaged time. Finally, one further breakdown can be made in describing how students spend their time in the school day. Research by Greenwood, Hall, and colleagues at the University of Kansas has demonstrated the importance of students having the opportunity for academic practice and to make active academic responses. Thus, the final breakdown is called active academic responding time and includes the academic behaviors of reading (silent and oral), academic talk, answering and asking questions, and writing.

In the IRLD observational studies, the focus was on academic responding time and on the instructional ecology of classrooms, which included how teachers allocated time for instruction. An observational system developed at the Juniper Gardens Children's Project (Greenwood, Delquadri, & Hall, 1978) was used to describe the instructional ecology (i.e., grouping structure, class activity, tasks and materials used, teacher position, and teacher response) and the student response (academic response, task management response, and inappropriate response). Observations were conducted over two entire school days for over 170 students using 10 second intervals and 53 specific codes to record the instructional ecology and the student response. Specific details on methodology and procedures used in the observational studies are available in reports listed in Appendix A.

The several observational investigations conducted by the IRLD

were directed at answering the following seven major research questions:

- What is the breakdown of how instruction occurs and how students spend their time during a typical school day?
  - What is the breakdown of time allocated to various activities?
  - What is the breakdown of time allocated to various tasks and materials?
  - What is the breakdown of time allocated to various teaching structures?
  - What is the breakdown of time allocated to various teacher locations?
  - What is the breakdown of time allocated to various teacher activities?
  - What is the breakdown of time spent engaged in various student responses?
  - What is the variability among students during a typical day?
- To what extent are there differences in how instruction occurs or how students spend their time as a function of students' teacher-perceived academic competence?
- To what extent are there differences in how instruction occurs or how students spend their time as a function of students' teacher-perceived behavioral competence?
- To what extent are there differences in how instruction occurs or how students spend their time as a function of students' reading group placement?
- To what extent are there differences in how instruction occurs or how students spend their time for students at different stages in the referral-to-placement process?
- To what extent are there differences in how instruction occurs or how students spend their time for LD and non-LD students?
- To what extent are there differences in how instruction occurs or how students spend their time for LD students receiving different levels of services?

WHAT IS THE BREAKDOWN OF HOW INSTRUCTION OCCURS AND HOW STUDENTS SPEND THEIR TIME DURING A TYPICAL SCHOOL DAY?

To answer this question of how instruction occurs and how students spend their time in a typical school day, the results from observations of 60 third and fourth grade students in regular classrooms were used. Each of the 60 students were observed for two entire school days; thus the averages given are based on 120 days of observation. Results are summarized below for each of the instructional ecology and student responding variables.

What is the breakdown of time allocated to various activities? Of the 390 minute scheduled school day, approximately 180 minutes were allocated to all academic activities, and about 30 minutes were allocated to non-academic classroom activities; the remaining 180 minutes were not observed because of lunch, recess, etc. Of the academic activities, the most time was allocated to reading (about 65 min), with math second at 45 minutes. All other academic activities received less than 30 minutes each. The most frequent non-academic activity was transition time (about 13 min per day).

What is the breakdown of time allocated to various tasks and materials? The breakdown of the tasks and materials used for instruction indicated that readers were the most frequently used task (about 70 min), with worksheets and other media (e.g., films, tapes, etc.) following at a little more than a half hour each. Getting materials ready (i.e., fetch/put away) comprised about 17 minutes of instructional time. Very little time was allocated to teacher-student discussion (less than 10 min).

What is the breakdown of time allocated to various teaching structures? Of the observed day, the overwhelming majority of time was devoted to an entire group teaching structure (about 150 min). About 40 minutes were allocated to small group settings, and only about two minutes were allocated to individual instruction.

What is the breakdown of time allocated to various teacher locations? Students received most of their instruction with the teacher either circulating among them (about 64 min) or in front of the class (about 63 min). Teachers were at the teacher's desk for about 39 minutes. Less than 10 minutes were spent in any of the following locations: out of the room, in the back of the room, and at the side of the individual student being observed.

What is the breakdown of time allocated to various teacher activities? The majority of teacher time (about 101 min) was spent in the teacher activity variable labeled "no response," which means that the teacher was not exhibiting any observable verbal or non-verbal teaching behavior to the observed student or group of students at that time. Teachers were actively involved in teaching activities directed at either the observed student or the class for about 71 minutes per day. Only small amounts of time (less than 10 min) were spent in other talk, approval, or disapproval. However, teachers overall gave five times more disapproval than approval to students.

What is the breakdown of time engaged in various student responses? Of the observed classroom time in the 390 minute school day, students spent most of their time in task management responses (about 140 min). Students spent only about 45 minutes of the entire

school day actually engaged in active, observable academic behaviors; they spent slightly less than one-half hour in all inappropriate behaviors.

Of the task management time, which comprised the major portion of students' responding in school, most time was spent in the behavior labeled passive responding (about 112 min). Passive responding included both listening and attending behaviors and "waiting" behaviors such as sitting at one's desk with work completed and nothing to do. Correlations calculated between time spent engaged in various student responses and student achievement revealed that passive responding is not significantly correlated with achievement.

The most frequent of the active academic responding behaviors, which totaled 45 minutes per day, was writing (about 30 min). Students spent only about 10 minutes per day actively engaged in all reading behaviors (silent and oral reading). Other active academic responses occurred for an average of less than 5 minutes per day, and most (asking and answering academic questions) occurred for less than one minute.

Of the inappropriate student responses, most time was spent engaged in looking around (14 min). The next most frequently occurring inappropriate responses were inappropriate play and non-academic talk (about 4 min each). All other inappropriate responses occurred for relatively small amounts of time.

The major finding of the research that focused on the breakdown of a typical school day is the small amount of time students spent actively engaged in academic responses. Of the 390 minute school day,

about 180 minutes are allocated to academic instruction, and only about 45 minutes are actively engaged in academic responses. Of this academic responding time, less than 10 minutes are spent in reading behaviors. On the other hand, students spend most of their time in passive types of responding (about 112 min), much of which can be labeled "wait" time. These findings have important implications regarding the need to increase academic responding time in regular classrooms.

What is the variability among students during a typical school day? The description of the typical school day, which is based on averages derived from 60 pupils and 120 days of observation, masks the considerable diversity that existed among individual students in how instruction occurred or how they were engaged.

As an example of the variability in how instruction occurred, the average amount of time allocated to reading for all students was 66 minutes, yet one student received only 12 minutes of reading while another received 113 minutes of reading. Similarly, while the average amount of time spent in business management (i.e., classroom organization) activities was eight minutes, the range for individual students in time allocated to business management was from zero to 58 minutes. These daily differences can amount to vast differences in the amount of instruction students receive over the course of the school year. For example, if the daily difference in time allocated to reading continued over the year, the student with the highest time would receive 277 more hours of reading instruction than the student with the lowest time.

Similar variability was observed in how individual students actually were engaged in academic or non-academic behaviors. As an example, the range in time actually spent actively engaged in all reading (oral and silent) was from 12 seconds to about 31 minutes, while the daily average for all students was about 10 minutes. If this daily difference were to continue between the highest and lowest student, the lowest student would have to read for 90 days to read for the same amount of time that the highest student read in one day. Vast differences also were observed in the time students engaged in passive responding ($\bar{X}$ = 88 min, range = 37 - 135 min) and time engaged in inappropriate behaviors ($\bar{X}$ = 5 min, range = 6 sec - 21 min).

These striking differences in how individual students received instruction and spent their time highlight the need to investigate the extent to which different groups of students vary systematically in how instruction occurred or how much opportunity to learn and practice they received. The remaining research questions address the extent to which there are group differences in instructional and student responding variables.

TO WHAT EXTENT ARE THERE DIFFERENCES IN HOW INSTRUCTION OCCURS OR HOW STUDENTS SPEND THEIR TIME AS A FUNCTION OF STUDENTS' TEACHER-PERCEIVED ACADEMIC COMPETENCE?

To answer this question, 30 students who had been rated by their teachers in terms of academic competence were observed for two days each. Students were randomly selected from the top, middle, and bottom third of each of 10 third and fourth grade classrooms to determine the extent to which high, middle, and low academic competence students differed in how they spent their time or in the

instruction they received. The major findings of this study revealed no significant differences in either the nature of instruction or the student responding time (academic, task management, or inappropriate) for students of different teacher-perceived academic competence.

Thus, the findings suggest that teachers did not arrange instruction differently for high, middle, and low academic competence students; further, these students did not differ in the amount of time they spent engaged in academic behaviors. There are alternative explanations for the finding that no differences were observed in how instruction occurred for high, middle, and low academic competence students. It is possible that this observation reflects reality in that teachers did not differentiate their teaching of students at differing levels, or it is possible that observations were not sensitive enough to detect subtle, more qualitative differences in the nature of instruction for different students. For example, it is possible that teachers asked higher academic competence students more complex questions. Similarly, there are varying explanations for the finding that students themselves did not differ in time spent in academic responding. It is possible that higher academic students, while spending equal portions of time in academic responses, completed more work or work of higher quality than lower academic competence students. It is also possible that higher academic students perform more work outside of school. However, regardless of the accepted explanation for the findings, the most important finding of this study is the small amount of time that all students actually are engaged in academic practice while in school.

TO WHAT EXTENT ARE THERE DIFFERENCES IN HOW INSTRUCTION OCCURS OR HOW STUDENTS SPEND THEIR TIME AS A FUNCTION OF STUDENTS' TEACHER-PERCEIVED BEHAVIORAL COMPETENCE?

For this study, 30 students who had been rated by their teachers in terms of behavioral competence were observed for two days each. In each of 10 third and fourth grade classrooms, students were randomly selected from the top, middle, and bottom third of the behavioral ratings. For most instructional and student responding variables, students of varying levels of behavioral competence did not differ significantly. However, significant differences were observed in the amount of disapproval that low behavior competence students received (about 3 min per day for low students versus about 1 min per day for middle and high students) and in the amount of time engaged in inappropriate behaviors (about 32 min for low students and about 23 min for middle and high students).

One conclusion from the major findings of this study may be that lower behavioral competence students "deserve" the disapproval they receive because of the higher amounts of time spent in inappropriate behaviors. Yet, a more educationally valuable conclusion is to point to the need to consider the complex ecology of the classroom and how various classroom variables contribute to the students' ranking as a behavior problem. An understanding of the ecological variables contributing to the behavior can help to devise instructional and behavioral interventions designed to alleviate the behavior problem in the classroom situation rather than signaling a presumed problem within the child.

TO WHAT EXTENT ARE THERE DIFFERENCES IN HOW INSTRUCTION OCCURS OR HOW STUDENTS SPEND THEIR TIME AS A FUNCTION OF STUDENTS' READING GROUP PLACEMENT?

In an investigation directed at answering this research question, 35 second grade students in high, middle, and low reading groups were observed for two periods of their scheduled reading time (two hours per day). Areas of significant differences emerged in the time allocated to individual instruction (almost 20 min more time was received by the low group), time spent engaged in reading aloud (about 2 1/2 min in the low group versus less than 1 min in high or middle groups) and time spent engaged in writing (the middle group spent 10 min, the high group spent about 8 1/2 min, and the low group spent about 5 min writing). It is interesting to note that despite the difference in time allocated to individual instruction for low students, differences of similar magnitude did not emerge in the amount of time that low reading group students spent in academic responses. While low reading group students did spend more time reading aloud than other students, perhaps the most striking finding of this study is the low amount of time (less than 10 min) that all students are actually engaged in reading responses during instructional reading time.

TO WHAT EXTENT ARE THERE DIFFERENCES IN HOW INSTRUCTION OCCURS OR HOW STUDENTS SPEND THEIR TIME FOR STUDENTS AT DIFFERENT STAGES IN THE REFERRAL TO PLACEMENT PROCESS?

To answer this question, students were observed for two days each at three points in time: (1) after referral but prior to child study, (2) one month following placement in special services, and (3) two months following special services placement. Only four students were

observed in this study due to various constraints in obtaining a larger sample within the school district. Thus, results are described in a case study format for the four students observed and only tentative conclusions can be drawn. Yet, results do serve to highlight the extreme variability among students as well as variability over time in the instructional and student response variables. Tentative results based on the four case studies suggested that one month after beginning to receive special services, students' academic and task management responses increased while their inappropriate responses decreased. However, average times reverted to pre-referral levels after two months. These results raise the question of the extent to which students experience beneficial changes in their instructional program or in time spent in academic responding as a result of placement.

TO WHAT EXTENT ARE THERE DIFFERENCES IN HOW INSTRUCTION OCCURS OR HOW STUDENTS SPEND THEIR TIME FOR LD AND NON-LD STUDENTS?

To address this question, 17 pairs of LD and non-LD students were observed for two days each. The LD students were mainstreamed for most of the day, and were observed both in the regular and resource classroom. In many of the areas of observation, there were no significant differences in how LD students or non-LD students received instruction or spent their time engaged. LD and non-LD students did not differ in time allocated to various activities or in overall time spent engaged in academic responding, task management responding, or inappropriate responding.

There were several specific instructional ecology variables in which LD students were significantly higher than their non-LD class

peers; these included: time allocated to other media tasks (46 min for LD v 32 min for non-LD), time allocated to individual instruction (35 min v 2 min), time with the teacher at the side of the student (19 min v 2 min), and teacher approval (30 sec v 10 sec). There also were several areas in which LD students were higher than their non-LD class peers in amount of academic responding: LD students were higher in time engaged in academic games (3 min v 1 min), reading aloud (3 1/2 min v 45 sec), academic talk (5 1/2 min v 2 min), answering questions (2 min v 1 min), and asking questions (1 min v 20 sec). These academic behaviors generally could be categorized as interactive on-task behaviors, and it appears that LD students have more opportunity to engage in interactive responses. However, it is important to note that the magnitude of the difference between LD and non-LD students was small.

On the other hand, non-LD students were significantly higher than LD students in some instructional and student responding areas. Non-LD students received more instruction in an entire group setting (2 3/4 hr for non-LD v 2 1/4 hr for LD) and they spent more time engaged in writing (30 min for non-LD v 22 min for LD). Overall, the differences between LD and non-LD students in types of academic responding "cancel out"; that is, the overall sum of time spent in academic responding does not differ for the groups - only the <u>type</u> of responding differs. Also, further analyses revealed that the increased amount of types of academic responding for LD students generally occurred while they were in the resource classroom. Thus, while LD students received greater opportunity to respond academically

in the resource setting, their academic responding time was significantly lower in the mainstream classroom than in the resource room. The finding that LD students do not exceed non-LD students in total academic responding time raises questions about the delivery system of LD services. A major finding of this study, as in the other studies, is the need for increased opportunity to be academically engaged for LD as well as regular classroom students. Currently, both LD and non-LD students were engaged in academic responding for only about 45 minutes of the entire school day.

TO WHAT EXTENT ARE THERE DIFFERENCES IN HOW INSTRUCTION OCCURS OR HOW STUDENTS SPEND THEIR TIME FOR LD STUDENTS RECEIVING DIFFERENT LEVELS OF SERVICES?

For this research investigation, 26 LD students receiving varying levels of LD service, from Level 1 (indirect) to Level 5 (full-time special class), were observed for two days each. No significant differences among students at different service levels emerged in the tasks or materials used, the teachers' response to the student, the location of the teacher relative to students, or the total time engaged in academic responses or task management responses. Several differences among groups were found in instructional approaches; less severely learning disabled students were allocated more time for academic activities, entire group teaching structures, and time of no teacher response than were more severely learning disabled students. More severely learning disabled students received more time for other media instruction, individual teaching structures, and teacher approval. However, few differences were found in students' opportunity to learn through active academic responding; academic

responding time was low for all students, averaging less than 45 minutes per day.

As in the previous studies, a major finding is the small amount of time spent in active academic responding. Also, it is interesting to note that students receiving greater amounts of LD services do not receive significantly greater opportunities for active academic responding than students receiving less service. Thus, the need to consider academic responding time as an intervention variable for students in all service levels is apparent.

## Implications

We believe referral is the most important point at which to intervene in the assessment and decision-making process for students. The national averages for students evaluated once referred suggests that child study teams respond to a teacher's referral by automatically conducting a psychoeducational evaluation of the student. Yet, the significant variability present in the referral to evaluation rates suggests that some districts respond differently. We believe that an important decision must be made when the teacher's referral is received: to evaluate or not. We suggest that classroom data must be collected and evaluated before this decision should be made. Therefore, prior to a comprehensive psychoeducational evaluation of the student, we recommend intervention within the classroom.

We recommend three key factors in developing a classroom intervention at this stage in the process. First, the plan must

address the teacher's specific referral concern. If the teacher has referred the student for several reasons, they need to be prioritized. An intervention must be designed for one reason at a time. Second, the plan must be the collaborative effort of the referring classroom teacher and a child study team member, ideally a school psychologist. The efforts of the classroom teacher and school psychologist represent two major disciplines, education and psychology, that influence student achievement and healthy psychological functioning. Third, a child study team member should observe in the classroom. We believe that observation is essential to assess the interaction of the student's characteristics and the instructional setting.

As a guide for observing the effect of the classroom setting on student behavior, we offer the following list of questions:

- What is the student being asked to do?
- What materials/tasks does the student use in completing the assignment?
- Does the student receive instruction in the entire group, small group, or individually?
- What is the teacher's response to the student?
- What is the student's response? What is the frequency of the student's inappropriate behavior, passive responses (e.g., wait, attend), or active academic responses (e.g., writing, reading)?

An observation geared toward assessing these classroom ecology variables provides critical information for implementing an academic or behavioral intervention within the classroom. These questions could be used to observe two or three other students, resulting in a comparison of the referred student to age-appropriate classmates. As

a result of the observation, data will have been collected on the influence of the environment on student behavior and the extent to which the student's behavior is discrepant from classmates. The classroom teacher implements and evaluates the effects of an intervention directed toward the problem in light of the classroom ecology. This intervention approach will provide assessment data within the classroom.

As indicated by the research on academic responding time, a likely beginning point for intervention involves the classroom environment itself, and specifically, the opportunity the student has to make active academic responses. A potentially powerful intervention would be to implement specific strategies to increase the academic responding time of a student having difficulties in school. Examples of intervention strategies based on a model of academic engaged time can be found in Muir (1980) and Noli (1980). Bergan (1977) and Acheson and Gall (1980) have presented consultation models that would be useful in applying information about active academic responding to the classroom setting.

At some point after the implementation of an intervention, a decision needs to be made regarding evaluation. If the intervention plan has resolved the teacher's concern, a psychoeducational evaluation is not needed. However, if the intervention has not resulted in the desired change in student behavior (the behavior was undoubtedly quite discrepant from the norm of classmates) further diagnostic study is suggested.

We believe that intervention prior to psychoeducational evaluation has many benefits. It provides opportunity to improve

instruction for all students. It provides data about the classroom variables that influence learning. It serves as a "filter," resulting in increased time for assessing and intervening with severely-handicapped children. Finally, it has respect for students, teachers, and tests. It respects the wide range of behaviors demonstrated by students. Not all students who are of concern to the teacher must undergo a comprehensive evaluation and possibility of labeling. It respects teachers' ability and interest in assisting their students. It respects tests by not expecting that data generated from tests can provide information relevant to every referral concern. We encourage child study teams to ask the critical question at the point of referral. Is a psychoeducational evaluation warranted?

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## Footnote

Richard Grubb, a director of psychological services (Allegheny Intermediate Unit, Pittsburgh, Pennsylvania) also provided reactions to the findings at the NASP convention. However, because of previous professional commitments he was unable to prepare a written reaction when later invited to do so.

## Reaction

by

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It would be most appropriate and helpful from the standpoint of the practicing school psychologist to respond to these two studies in reverse order. Specifically, before addressing the issue of referral-assessment-placement, it is essential to carefully consider the environment from which the referred child comes, namely the regular classroom. The second study so very well documents and depicts that regular classroom environment. In reflecting on the massive amounts of data generated by the second study, there are two major conclusions that merit attention from school psychologists. The major premise is that the amount of time spent in active academic responding is a critical variable in student learning. The first conclusion of the second study is that the level of academic proficiency, behavioral competence, and even the label LD did not result in any meaningful increase in the amount of time spent in active academic practice that students experienced in the regular classroom setting. The second and more compelling conclusion is how little time all students spend in active academic responding in the regular classroom on a daily basis. A mere 45 minutes of active academic practice during a 390 minute school day add up to a lot of wasted effort when active academic practice is determined to be the most significant factor affecting student learning.

Having considered student behaviors in the learning environment, we can now consider the behaviors of the major decision makers in that environment, the teachers. The data from the first study suggest that teachers lack critical awareness of the impact on students of environmental factors within the regular classroom, specifically time usage and productive educational behaviors. Unable to take an objective stance about the learning environment in which they and their students function, the almost universal teacher response is to identify the problem as other-centered, i.e., in the child. Truly, fish will be the last to learn about water!

As the second study suggests, it is clearly the case that there are many "system" and "time management" problems that conspire to create learning difficulties for individual students. Virtually every practicing school psychologist has had (or should have) the experience of receiving a referral on a child and discovering, upon observing the child in the classroom, that the teacher has the problem. However, as the first study indicates, in the majority of cases, it is the student who is "disabled" with little attention given to the notion that perhaps the student is having to function in a disabling environment. That is somewhat akin to blaming the fish for dying from water pollution.

Now, what can we do about this sorry state of affairs? We have teachers who believe that the child has the problem and observational data that indicate the water is polluted. Our goal as school psychologists is to differentiate those students who really do have learning problems from those who are reacting to the problems created

by the learning environment. As both studies have demonstrated, what confronts the school psychologist is a set of simultaneous equations whose variables are interdependent and essential components for generating possible interventions at the point of referral.

Clearly, the initial intervention is environmental management because we want to see positive child change, not placement in an equally polluted environment. The interventions we design have the goal of increasing active academic practice in the classroom with the positive outcome of increased learning. A major component of school psychology practice should be to spend sufficient time observing teachers and students in the teaching/learning situation. Data can be gathered on time usage, feedback given to the teacher, and a plan developed to increase the amount of active academic practice for the referred student. It might be worthwhile at this point also to have the teachers take an objective look at themselves by use of videotape. It is difficult to refute such objective data. Environmental changes seem to flow more freely when initiated by the teacher and facilitated by the school psychologist. The potentially positive effect on all students is certainly a desired and worthwhile outcome.

It is also essential for the school psychologist to work with the referred student individually to determine what problems there are and how to best manage them. For example, the student must be given practice material within his/her competency level. It is therefore essential for the school psychologist to work individually with the student on the actual tasks he/she is being asked to do in the classroom in order to determine the child's actual skill level. The

objective is task analysis and to help the teacher design a program to insure success for the student. This combination of feedback, individual contact with students, and additional feedback to teachers is the most effective in gaining teacher support for effective interventions. The net result is that we and the teachers redefine the problem in terms of positive academic practice and not in terms of special education placement.

What emerges from all this is a vastly different role for the school psychologist. Rather than assisting the teacher in determining what is wrong with the child, the school psychologist's task is to analyze the relevant factors in the equation: teacher, student, and time usage in the classroom. The psychologist then works with the teacher and student to develop a solution to the equation. This is a far more challenging task than "determining eligibility for special education." Furthermore, the outcome is far more satisfying for all concerned. The bottom line for school psychologists is to help teachers and students learn about the water in which we all live.

APPENDIX A

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